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P.1/18

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DATE:

5/6/04

TO: Perisella Burton

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FROM: John Gelfert

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Special Instructions: \_\_\_\_\_

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Pam Embrough - L

J. Emberson

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**Gefferth, John**

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**From:** Gefferth, John  
**Sent:** Thursday, May 06, 2004 8:52 AM  
**To:** Pam Grubaugh-Littig (E-mail)  
**Cc:** Pachter, Jonathan; Kirkham John (E-mail); 'PRISCILLABURTON@utah.gov'; 'jerriannernstsen@utah.gov'; 'RRHALL@stoel.com'  
**Subject:** Emery appeal amendment

Pam

The attachments are the draft changes we agreed to on Friday 4/30.  
Mary Ann wanted to review them in draft prior to submittal.  
The word doc pertains to Norwest Appendix X. C-3  
The Wordperfect files pertain to the MRP.  
I will also fax them to you.

I will be in the office today and Friday, if you get my recorder try my cell.  
If the changes are acceptable please let me know and I will submit with proper forms.



Draftamd.Emer y.doc



CH10PG5.dn.  
WPD



CH10PG5A.dn.  
WPD



CH10PG5B.dn.  
WPD



CH2PG17E.dn.  
WPD



CH2PG25.dn.  
WPD

*John Gefferth*

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38-year period. Temperature extremes are shown on Tables X.B-4 and X.B-5. During the period from 1960 to 1978 winter temperatures varied from -16°F to 85°F and summer temperatures varied from 11°F to 98°F. (BLM, 1979).

Since 1978, there has not been a weather station operating in the vicinity of the Emery Mine site. From 1978 thru 1986 a weather station did record precipitation, temperature and wind at a higher elevation (+1,400 feet). ~~Therefore, the permittee will install a weather station on-site of the permit. The weather station shall record precipitation, temperature, barometric pressure, wind speed and direction. The information shall be recorded and submitted within the annual report. The initial data from this weather station is anticipated to begin in January 2003. A weather station installed at the mine will collect rainfall data. The data will be compiled and monthly averages will be calculated and submitted in the annual report.~~

~~The superintendent or his designated person will be responsible for wind data collection and maintenance of the weather station.~~

#### References

Bureau of Land Management. 1979. EMRIA Report No. 16: Reclaimability Analysis of the Emery Coal Field, Emery County, Utah. Prepared by Playa Del Rey, CA: Geoscientific Systems and Consulting for the BLM.

VTN. 1974. Environmental Assessment Report for the Emery Mine Project, Consolidation Coal Co. and Kemmerer Coal Co., Emery County, Utah. Denver: VTN for Consolidation Coal Company.

Revised 10/2002  
Revised 1/2004  
Revised 5/2004

### 1a. 4th East Portal Site

Fugitive dust emission at the 4th East Portal will consist primarily from the coal handling and stockpiling of coal. The coal stockpile will be sprayed with water, when conditions warrant, as it is discharged into the pile. In addition the stockpile will be protected to some degree by the rock stockpile located to along the west side of the boxcut. This rock stockpile will function as a wind break from the prevailing westerly winds. The rock stockpile consists primarily of cobble to boulder size sandstone.

The road to the coal loadout will be watered to reduce fugitive dust periodically as needed as determined by mine personnel throughout the day. Topsoil stockpile will be roughened, seeded and mulched to prevent wind and water erosion. Berms shall remain roughened and seeded. Rock or wood mulch as well as erosion control netting may be utilized as situation warrants to minimize effects of erosion.

On January 9, 2003, Notice of Violation was written for wind blown coal fines outside the permit area. To abate the violation a dust control plan was initiated, the following Air Resource Protection shall be implemented ~~to eliminate the generation of coal fines and provide measures to protect the surrounding environment from accumulation of coal fines should they occur.~~

#### ~~Dust Control Program:~~

- ~~■ Dust treatment program (coal yard and truck re-route areas)~~
- ~~■ Water cannon~~
- ~~■ Concrete (Jersey) barriers~~
- ~~■ Wind fences~~
- ~~■ Conveyor and transfer point enclosures~~
- ~~■ Water sprays (conveyors)~~
- ~~■ Water truck~~
- ~~■ Vacuum truck~~
- ~~■ Cattle guard~~
- ~~■ Replacement of crusher~~
- ~~■ Haul truck re-routing~~
- ~~■ Maintenance plan~~

Details for each of these engineering controls and other measures are discussed in Appendix X.C-3. Consol is committed to has implemented Phase I of Norwests dust control plan as described in App.X.C-3 of the MRP. Consol will implement Phase II if it is determined that Phase I fails to adequately control the coal fines.

Inserted 9/2003  
Revised 1/2004  
Revised 5/2004

As a measure of success of the dust control plan and to establish a baseline, Consol has agreed to establish transects according NRCS guidelines. Prior to production, Consol will contact NRCS for assistance in establishing a baseline on the area East of the road on Consol property. This baseline will consist of three transects, each containing three sample sites. Once The transects are in place, their location will be submitted to DOGM for inclusion in the MRP. The sample points will be clearly marked for field identification. Once production resumes and a stockpile is created these nine sample sites will be monitored monthly to calculate the % coal fines on the surface soil. The NRCS has indicated that they would instruct DOGM and mine personnel, from the Field Book for Sampling Soils, on the method to determine % cover. Records of the initial baseline and the monthly observations will be kept on site.

~~In addition to the above monitoring, there will be a person certified in opacity reading to conduct opacity readings at the eastern permit boundary. The readings will be done once every fifteen seconds for six minutes. The readings will be recorded on a Visible Emissions Recording Form, and kept on file for inspection. A digital photo of the opacity will be taken and kept on file.~~

~~The opacity readings will begin when production resumes. They will continue twice per week for the first six months. If there are no fugitive dust problems noted from the monthly checks of the soil surface, the opacity reading frequency will be reduced to once per week for one year. If after this period, there are no noted fugitive dust problems the opacity readings, and monthly transect monitoring will be terminated. This 1½ year monitoring period will be considered the cumulative time period that coal is being produced, stockpiled and/or hauled at the 4th East portal. If there is not a stockpile (i.e. production ceases) the monitoring will temporarily be halted and will not resume until coal production and/or haulage resumes.~~

~~The opacity readings will be done at the eastern permit boundary. The opacity reader will stand on either the southeastern or northeastern permit boundary, depending on the position of the sun and the sky conditions. The opacity reader will try to take the readings during the afternoon when possible.~~

Inserted 01/2004  
Inserted 02/2004  
Revised 5/2004

**Ventilation Fan Road**

Map Code: identified on Plate II-3  
Status: Existing - 4th quarter of 2002

Classified as a primary roadway. Light truck traffic will use the road to access the ventilation fan.

**Coal Loadout Road**

Map Code: identified on Plate II-3  
Status: Proposed - 4th quarter of 2002

Classified as a primary road. The roadway will enter the loadout along the east fence line from County Road No. 915. Coal trucks will load from the loadout bin and proceed across the scales located near the northeast corner of the permit area. Trucks & other vehicles will exit onto Emery County Road No. 915 (referred locally as "Cowboy Mine Road"). Drainage off the road will be conveyed to sediment pond 9.

**Jersey Barriers**

Status: Proposed - 4th quarter of 2003

These barriers will be strategically placed along the perimeter of the stockpile to prevent encroachment of coal fines into the adjacent plant area.

**Wind Fence**

Map Code: Identified on Plate II-3  
Status: Proposed - 4th quarter of 2003

Wind fence(s) will be constructed upstream of the stockpile. The wind fence disrupts the mechanism that causes dust particles to become airborne.

**Water Cannon**

Map Code: Installed near stockpile, perhaps integrated with/on wind fence.  
Status: Proposed - 4th quarter of 2003

Used to control fugitive emissions during high wind events. System can be activated manually or automated based on wind velocities.

Inserted 10/2002  
Revised 9/2003  
Revised 5/2004

**UMC 817.52**

In addition to NPDES monitoring of discharge points, a monitoring program of surface and ground water sites has been established to assess mining impacts on these resources. The current operational monitoring plan is described in Sec. VI.A.5.

**UMC 817.95**

Protection of air resources during operation of the mine is discussed in Part C of Chapter X. Appendix X.C-1 evaluates emissions from the proposed preparation plant. Fugitive dust (particulate) is considered the only potentially significant air pollutant generated by both facilities. Appendix X.C-2 evaluates emissions from the 4th East Portal. Appendix X.C-3, Norwest's evaluation and recommendation of engineering controls and other measures to minimize generation of dusting from the 4th East Portal, ~~was initiated to abate NOV 03-39-11. Consol is committed to implementing Phase I of Norwest's dust control plan as described in App.X.C-3 of the MRP. Consol will implement Phase II if it is determined that Phase I fails to adequately control the coal fines. Phase II controls, if necessary, will consist of a permanently installed and integrated dust suppression system, such as Benetech's program for dust control on conveyor systems and downstream stockpiles~~

~~The Phase II Benetech system as it was presented to DOGM by Norwest on August 26, 2003 has been partially installed. The pipe system for the watersprays and water cannons, and the two control boxes (flow control and electric control) are components of the Benetech designed system. If Phase II is warranted, a chemical additive station will be installed and plumbed to the existing pipes.~~

Control measures employed at the current operation utilize water sprays at all product transfer points, a silt fence downwind of the conical product stockpile, a water truck to wet down unpaved roads, and revegetation of topsoil and subsoil stockpiles. Measures to be used at the proposed coal preparation plant will include fully hooded conveyor belts, totally enclosed transfer points with water sprays, stacking tubes with water sprays at storage pile loading points, revegetation of topsoil and subsoil stockpiles, and water spraying of unpaved roads.

All control equipment will be properly installed, maintained, and operated such that visible emissions from the facilities will not exceed opacity limits established by the Utah Division of Environmental Health and applicable requirements of the Clean Air Act. Operator will perform opacity readings as required by the modified approval order.

**UMC 817.97**

Protection of fish and wildlife during operation of the mine is discussed in Chapter IX. The discussion addresses mining impacts on these resources and mitigative measures that will be

Revised 10/2002  
Revised 10/2003  
Revised 1/2004  
Revised 2/2004  
Revised 5/2004

## Amendment to Mine Reclamation Plan (MRP) – Emery Mine

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## Amendment to Mine Reclamation Plan (MRP) – Emery Mine

### Appendix X.C-3, 4<sup>th</sup> East Portal

*(Note: The Phase I controls discussed below include all those presented to and approved by DOGM on August 26, 2003. Phase II controls, to be activated only if Phase I equipment and measures do not adequately control coal fines, are not addressed here. Phase II controls, if necessary, will consist of a permanently installed and integrated dust suppression system, such as Benetech's program for dust control on conveyor systems and downstream stockpiles. If Phase II is warranted, details of the dust suppression system will be presented in the application to further amend the MRP.)*

The general layout of the Emery Mine 4<sup>th</sup> East Portal is given in Figure 1.

#### DUST TREATMENT PROGRAM (COAL YARD AND TRUCK RE-ROUTE)

*(Note: In order for this control to be fully implemented, the 1.5-acre parcel located between the east boundary and County Road 915 must be integrated into the current permitted area.)*

The 1.5-acre parcel of land situated between the east fence line and County Road 915 will be used for the re-routing of haul trucks, as shown in Figure 2. The new route will completely by-pass the present circular path in the coal yard around the stockpile, which will greatly reduce onsite traffic and the attendant dusting. In addition, the new routing will reduce the tracking of material outside the plant. Haul trucks will continue to approach to the 4<sup>th</sup> East Portal area along the newly paved county road. The trucks will then enter CR 915 (presently an unpaved dirt road), proceed along the road about 500 feet, at which point the trucks will turn to the right off the county road, and will travel in an arc path to the new truck entrance to the plant just south of the load out hopper. The trucks will continue to be loaded as in the present manner, and then will exit the plant through the main gate.

The entrance road will be upgraded as shown in Figure 3A. The existing county road will be bladed to widen the road to accommodate two-way traffic for a distance of about 500 feet, beginning near the entrance to the 4<sup>th</sup> East Portal coal yard and continuing in a southeast direction. The road will be contoured as needed to afford proper drainage. The bladed and compacted road segment will then be armored with about 6 inches of gravel and conditioned with water prior to application of magnesium chloride dust suppressant as per vendor's recommended rate (e.g., 0.5 gallon of the prescribed mixture of magnesium chloride and water per square yard of surface area). A Material Safety Data Sheet (MSDS) provided by one of the vendors contacted (WRR Industries) and information on the uses and application rates for the chemical are found in Appendix A.

The upgrades described above for CR 915 will also be applied to the turn off to the plant, including the application of gravel. Figure 3B shows the general locations where gravel will be applied. The arc-shape will be sufficiently large (e.g.,  $\geq 60$  foot radius) to safely route trucks onto the property. In order to further minimize potential dusting, the county road segment will be posted with a 10 MPH speed limit sign, effective along the 500-foot segment and the turn off to the plant.

Topsoil will be removed from a portion of the 1.5-acre parcel and stockpiled, and the area will be re-graded to allow drainage to flow to the approved and existing sediment pond to the north. See Figure 2. An 18" diameter culvert will be installed near the main gate, a natural low point, to convey runoff from the disturbed area to the pond.

The main traffic routes within the coal yard (e.g., the loop around the stockpile and the roadway west toward the spoils pile) will also be upgraded as described above for CR 915, except for the gravel cover. Figure 4A shows the coal yard and re-route areas where dust suppressant will be applied. In all cases the maintenance program (described in greater detail below) will monitor the ongoing effectiveness of the magnesium chloride at suppressing dust. When breakdown is noted, re-application of the chemical will occur. Two to four applications per year are standard practice.

The application of magnesium chloride in the re-route and the coal yard areas will be supplemented by the localized application of dust suppressant (e.g., portable spray device) in hard to access areas, such as the stockpile base and around the concrete barriers, as discussed below. ~~Benetech's Dust-TARBT, e.g., is available in totes, and will be stored onsite, mixed with water to the proper mixture, then applied where and when needed.~~ See Figure 4B for possible locations for localized application.

Traffic (truck) re-routing is applied in general industry to shorten the travel path, to avoid areas where dusting may occur, and thereby better control air emissions. This aptly describes the haul truck traffic situation at Emery, where travel path and duration in dusty areas can be reduced by re-routing truck traffic.

The Environmental Protection Agency's (EPA's) AP-42 document (see Appendix B), a comprehensive compendium of air emission factors and controls for a wide range of industry categories, endorses traffic re-routing as a means of reducing dust levels. In the Emery case, it will also allow for less re-entrainment of coal and other particulate matter.

Truck re-routing is considered Good Engineering Practice (GEP) and Best Management Practice (BMP), because the design of a shorter travel path results in fewer air emissions.

### WATER CANNON

One or more high volume (about 100-150 gallons per minute) water cannons will be installed near the stockpile as depicted in Figure 5. The water cannons' installed location will be determined during wind fence construction. During periods of elevated wind velocities, the cannons will be either manually or automatically activated. Water cannons designed for all-weather use will be installed. The basic manual system will be automated using a wind-speed indicator and water activation trigger device. Guidance from U.S. EPA (AP-42 Compilation of Air Pollution Emission Factors, Section 13.2) indicates that entrainment of dust from aggregate storage piles occurs at wind velocities over 12 miles per hour (mph). When sustained wind velocities exceed 12 mph, water cannons will be automatically activated. Cannons will remain on for a period of several minutes (up to 15 minutes) – long enough to adequately wet the pile without causing runoff. If elevated wind velocities persist, the water cannons will continue to be activated on a pre-set cycle (e.g., no more than one activation per hour). The operator will review historic mine weather station data as it becomes available and adjust the wind speed trigger accordingly.

When operators are onsite, there will be the option for manual override of the system, i.e., the ~~mine superintendent~~ operator will be able to activate and operate the water cannon system when he determines that conditions warrant it. Manual override will also be used to demonstrate the effectiveness of the system when required, e.g., during inspections.

The attached technical bulletin, found in Appendix C, from Nelson Irrigation Corporation for their 100 Series Big Gun nozzle demonstrates that varying combinations of water pressure (psi), water flow rate (gpm) and nozzle diameter will provide more than adequate coverage of the stockpile area based on throw (diameter, ft) of the nozzle. The nozzles (probably two, as conceptually shown in the September 12, 2003 Mine Reclamation Plan package submitted to DOGM) will also be located on stands, probably several feet in height to maximize water distribution in the pile area. A further feature available from the manufacturer that enhances throw of water spray is a choice of angle of trajectory for the nozzle. For example, for the 100 Series nozzles the vendor offers trajectory choices of 18, 21, 24 and 43°. In addition, the nozzles will likely be arranged, as shown in the conceptual drawing in the September 12 submittal, so that the spray patterns overlap, further ensuring adequate coverage. A video clip viewable at [www.nelsonirrigation.com](http://www.nelsonirrigation.com) (click products then Big Gun sprinklers) further demonstrates the coverage capabilities of the nozzles being considered. Probably the most striking feature in the clip is that the arcing stream provides a curtain of water that blankets everything in its path. The nozzle does not simply throw a stream of water a desired distance. With the design features considered, CONSOL is confident that the water cannons will provide adequate coverage of the stockpile area.

*Updated 1-21-04*

The use of wind fences in this application is considered GEP and BMP, because wind velocity impacting the pile is reduced up to 60%, depending on alignment of the fence and mesh material. Wind that contacts the surface tangentially is either dampened or deflected.

Wind fences have been applied at Tri-Gen Bio Power in Loudon, TN; at Cape Breton Development Corporation in Sydney, Nova Scotia; at Helvetia Coal Company's Lucerne 6E Mine near Indiana, PA; and at Graymont Western in Calgary, Alberta.

#### **CONVEYOR AND TRANSFER POINT ENCLOSURES**

Lightweight metal panels or sections of conveyor belt will be used to better enclose the conveyor belt system at the mine. The stacker conveyor, for example, has openings on the west side, and the prevailing wind is from the west. In addition, enclosure of transfer points will be improved by adding panels where feasible.

Enclosing material handling devices (conveyors and transfer points) is general industry practice to reduce fugitive dust emissions. EPA's AP-42 document (see Appendix B) frequently refers to enclosure as one of the preferred control options. At Emery, improved enclosure of the radial stacker on the windward side and the conveyor system transfer points will reduce dusting from these sources. The material handling system at Emery is already partially enclosed; more completely enclosing conveyors and transfer points is considered GEP and BMP.

#### **WATER SPRAYS (CONVEYORS)**

Water sprays will continue to be operated at the three locations indicated in the attached Figure 10, namely the crusher inlet, the crusher outlet and the stacker discharge. The spray bars will be upgraded to accommodate the possible addition of a dust suppressant at a future date if required.

~~DOGM has previously agreed that should Phase I controls fail to achieve the intended results with regards to off-site deposition of coal fines, then Phase II controls (i.e., the Benetech permanent and integrated dust suppression system) must be implemented. The water spray system to be installed and operated under Phase I is designed and will be installed by Benetech. This assures compatibility of design and equipment should Phase II be necessary. As previously discussed with DOGM, the locations of the Benetech spray bars under the upgrade plan are the crusher inlet, the crusher outlet and the stacker discharge.~~

The use of water sprays to control fugitive emissions in both paved and unpaved areas is widespread in general industry; water has been used effectively in applications similar to Emery Mine for years. EPA's AP-42 document (see Appendix B) recognizes the value of applying water to haul roads and unstabilized (unpaved, disturbed) areas, such as the coal yard at the Emery Mine. Although a high evaporation rate as found at Emery may shorten the effective longevity of the control, this is offset by multiple applications along the conveyor system. The use of water sprays in this application is considered GEP and BMP, because water is effective at controlling dust if periodically re-applied, based on evaporation rate. Water sprays are relevant to the situation at Emery, because they have a proven track record in similar applications in arid climates.

The location of the spray points (along the conveyor system) was a determination made by Benetech during their site visit at the 4<sup>th</sup> East Portal. ~~As previously discussed, it is imperative that the Benetech water sprays be installed as per their specifications under the Phase I control program in the outside chance that the Phase II program (i.e., Benetech's permanent and integrated Benetech dust suppression program for the conveyor system) may someday be necessary.~~

#### **WATER TRUCK**

The current water truck has a gravity feed water distribution system. The water delivery feature will be upgraded to a multi-point spray bar, and the truck will be used to supplement the magnesium chloride dust treatment program in the coal yard and re-route areas by adding moisture to the areas treated with magnesium chloride and by wetting untreated areas as needed for dust control.

**REPLACEMENT OF CRUSHER**

The current hammer mill crusher is rated at 500 TPH. See Figure 13 for location. It will be replaced with a 500 TPH double-roll crusher or other type of non-pulverizing device. Regulatory agencies (EPA, OSHA, MSHA) consider substitution or modification of process equipment known to generate less air emissions a valid engineering control (GEP and BMP). Replacing the crusher at Emery, e.g., is an ideal application of this engineering principle, where a double-roll crusher or other type of non-pulverizing crusher would produce a larger size product, on average, than the present hammer mill crusher. Substitution of equipment for the purpose of emissions reduction is widely observed in general industry. See Appendix H for specifications on candidate replacement crushers located to date.

Prior to crusher replacement, a Notice of Intent (NOI) will be timely filed with Utah's Division of Air Quality. A courtesy copy of the NOI will be sent to DOGM.

**TRUCK RE-ROUTING (SEE ABOVE SECTION ON DUST TREATMENT PROGRAM FOR DETAILS ON TRUCK RE-ROUTING)**

Figure 14 shows the location of the combined Phase I controls at the Emery Mine 4<sup>th</sup> East Portal area.

**MAINTENANCE PROGRAM**

~~The mine superintendent's main function is to direct all day-to-day, on-site activities as they relate to operations at the Emery Mine's 4<sup>th</sup> East Portal. The mine superintendent is the stockpile manager, responsible for the initial implementation and ongoing sustainability of the dust control plan. He will be responsible for inspections, maintenance and repairs of the dust control equipment and measures. Furthermore, he will direct the on-site training activities, to include mine personnel and haul truck drivers, so that each person at the 4<sup>th</sup> East Portal understands his job as it relates to dust control.~~

~~See Appendix I for the outline of the maintenance program for the Phase I controls at the Emery Mine 4<sup>th</sup> East Portal area.~~

~~During site inspections by DOGM, dust controls and measures will be readily available for demonstration purposes, as follows:~~

~~**WATER SPRAYS** Water sprays will be on and available for inspection during normal operation when material is on the moving conveyor belt.~~

~~**WATER CANNONS** Water cannons will be capable of manual activation and operation. Accordingly, this system will be available for demonstration upon request.~~

~~**WIND FENCE** The wind fence is a passive control device that reduces wind velocity or deflects wind around a potential dust source, in this case the stockpile. The optimal demonstration opportunities for this passive device will be during periods of elevated and sustained wind velocities, particularly under prevailing wind conditions (out of the west).~~

~~**CONCRETE BARRIERS** Personnel will be able to immediately verify the optimal placement of concrete barriers in the stockpile area, and whether cracks have been properly sealed to prevent blowing dust.~~

**~~APPENDIX I~~**

**~~MAINTENANCE PLAN~~**

## **Appendix I — Maintenance Plan for Emery Mine 4<sup>th</sup> East Portal**

Once the engineering controls and other measures are implemented at the 4<sup>th</sup> East Portal area, they will be inspected on a set schedule under the facility's maintenance plan so that the effectiveness of the controls is maintained. A maintenance log will be kept at the facility and updated at least weekly. The mine superintendent will be responsible for inspection and maintenance activities as they relate to the dust controls and measures. An integral part of the maintenance plan will be the provision for training and education, whereby plant personnel will be made aware of the controls in operation at the mine. They will be trained to know when the controls are not operating properly and how and to whom to report malfunctions.

The engineering controls and other measures included in the inspection and maintenance program are as follows:

- ~~Dust treatment program (coal yard and truck re-route areas)~~
- ~~Water cannon~~
- ~~Concrete (Jersey) barriers~~
- ~~Wind fences~~
- ~~Conveyor and transfer point enclosures~~
- ~~Water sprays (conveyors)~~
- ~~Water truck~~
- ~~Vacuum truck~~
- ~~Cattle guard~~
- ~~Replacement crusher~~
- ~~Truck re-route~~

The inspection forms will likely contain the following elements:

### **Dust Treatment Program**

- ~~Weekly inspection of the truck re-route and coal yard area for determination of effectiveness of dust suppressant and condition of gravel cover~~
- ~~Indicate whether re-application of dust suppressant or repair of gravel surface is indicated~~
- ~~Maintain log of when dust suppressant applied~~
- ~~Indicate whether localized application of dust suppressant is needed, e.g., along the stockpile berm~~
- ~~Maintain weekly log of repair and maintenance activities~~

### **Water Cannon**

- ~~Weekly test of water cannon to assure adequate pressure and proper coverage of stockpile area~~
- ~~Indicate whether repairs or adjustments to the system are needed~~
- ~~Weekly check on condition of wind activation system~~
- ~~Record of when water cannon system is activated by wind~~
- ~~Maintain weekly log of repair and maintenance activities~~



Jersey Barriers

- ~~Daily inspection for optimum placement of barriers to contain the stockpile base~~
- ~~Assure that barriers separate the stockpile area from the truck loading area~~
- ~~Indicate condition of the barriers and whether gaps exist between barriers that allow material outside the containment area~~
- ~~Assure that material is consolidated onto the pile to decrease exposed surface area of material that may produce dust~~
- ~~Maintain weekly log of repair and maintenance activities~~

Wind Fences

- ~~Daily check on the condition of the mesh material — Any rips or tears?~~
- ~~Over a period of time, determine if the fence is optimally positioned to prevent wind erosion from the stockpile area~~
- ~~Maintain weekly log of repair and maintenance activities~~

Conveyor and Transfer Point Enclosures

- ~~Daily check when operating on whether conveyor enclosure panels are in place and in good condition~~
- ~~Daily check when operating on enclosures for transfer points~~
- ~~Maintain weekly log of repair and maintenance activities~~

Water Sprays (Conveyors)

- ~~Inspect each operating shift for proper operation of water sprays, e.g., adequate pressure, no clogged spray nozzles~~
- ~~Maintain weekly log of repair and maintenance activities~~

Water Truck

- ~~Prior to use, determine if spray coverage is adequate, e.g., pressure is acceptable and nozzles are clear~~
- ~~Maintain log book showing date and times of water application and areas where applied~~
- ~~Maintain weekly log of repair and maintenance activities~~

Vacuum Truck

- ~~Maintain log of when and where vacuum truck is used~~

Cattle Guard

- ~~Daily inspection of condition of grate and underlying concrete sump~~
- ~~Indicate whether the sump needs to have solids removed (vacuum truck)~~

- ~~Log book showing date and description of repairs~~
- ~~Maintain weekly log of repair and maintenance activities~~

#### Crusher

- ~~Perform routine operations and maintenance checks when operating to assure proper performance~~
- ~~Maintain log showing date of all repairs~~
- ~~Maintain weekly log of repair and maintenance activities~~

#### Truck Re route

~~See Dust Treatment Program (coal yard and truck re route areas) for checklist items applicable to the truck re route area.~~

~~Log books and inspection and maintenance records applicable to the above engineering controls and other control measures will be updated at least weekly and will be available for review at the Emery Mine.~~

~~A training and education outline to be used for employee awareness sessions will be developed, and a copy of the training program will be kept on file at the facility. Training records will also be maintained.~~